DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-003991
Date Inspected: 26-Sep-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 900
OSM Departure Time: 1700
Location: Muroran, Japan

CWI Name: Kuan Chung

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower,Jacking and Deviation Saddle

Summary of Items Observed:

The following report is based on METS observations at Japan Steel Works (JSW) in Muroran Japan. Current work: Casting, machining and repair of Saddles.

FOUNDRY SHOP

On this date the QA representative Dong J, Shin arrived at Japan Steel Works (JSW) of Muroran Japan and traveled to JSW foundry, QA Inspector observed to the casting Build up welding on West Deviation Saddle casting W2-E2. The welding was performed to build up the thickness of the ribs in areas that were found to not meet the minimum thickness of the contract special provisions. The repair locations and repair details for this casting were submitted as number 000643, revision 02. The JSW welding personnel Mr. A, Takenami identified as number 06-8001 Continued the in process build up welding of Rib1U, repair 3-9, location I-2 build up weld process with utilizing the Shielded Metal Arc Welding (SMAW) process per the welding procedure specification (WPS) SJ 3026-2. The welding was performed in the 2G (Horizontal) position. The filler metal utilized was identified as 5mm diameter, Class E10016-G, Brand name LB-106. The minimum preheat temperature of 160 degrees Celsius and maximum interpass temperature of 260 degrees Celsius was verified to meet the WPS requirements by Mr. Imai. The SMAW welding average amperage and voltage by clamp type meter and travel speed were verified to be within the welding procedure specification parameter range of 180 amps to 240 amps, 22 volts to 26 volts and travel speed of 115 to 280 mm per minute by the QA inspector. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

PQR WITNESS

WELDING INSPECTION REPORT

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At 1300 hours, the Caltrans Quality Assurance (QA) inspector arrived at JSW fabrication shop number 4 and observed a procedure qualification test designated SJ-2942 WP-16 performed by JWS welding personnel Mr. K. Kobayashi. The welding was performed utilizing the Shield Metal Arc Welding and Flux Core Arc welding Process in the Flat (1G) position. The SMAW filler metal electrode appeared to be Hoballoy, E9018-M H4R, AWS designation A5.5, 4.0 mm diameter and FCAW filler metal appears to be TM 95K2, E90T5-K2C H4, AWS designation A5.29. The test plate thickness was 110mm (30% for SMAW and 70% for FCAW). The welding was performed per the AWS D1.5, 2002 Section 5.7. requirements. The Intertek QC inspector, Mr. Kuan Chung checked welding parameter and recorded the preheat and interpass temperatures, the average amperage, voltage and the travel speed for all weld passes. The QA inspector observed that the welder Mr. Masao Yamashita ground cleaning each weld pass to smooth bright finish prior to starting the next weld pass. The welding of this plate was completed on this date. The QA inspector noted that the welding appeared to meet the minimum requirements of AWS D1.5-2002 and the contract documents.

NDT

The QA inspector periodically observed The Nikko Inspection Services (NIS) QC/NDT technicians Mr. Kazuya Kobashi and Mr. Kumagai perform magnetic particle (MT) testing of West Deviation Saddle base W2E2 after PWHT. The MT was performed in accordance with ASTM standard E709, using the yoke method. The yoke utilized appeared to be model VM3, serial number 97049. The yoke dead lift was verified with a 4.65kg test plate. The magnetic field was verified with a field indicating gauge (pie gauge) using red dry powder. All calibrations appear to meet the minimum requirements of ASTM E709. The testing was evaluated in accordance with the contract special provisions.

The testing was not completed on this date.

Summary of Conversations:

No specific conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Shin,DJ	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer